



EnergInno Brazil 2022

Local biogas production from organic waste a tandem project of FH Aachen University of Applied Science and Bert Energy



FruitCycle The Problem



What to do with organic waste?

- green waste
- fruit / vegetables / kitchen waste
- food waste
- market waste



FruitCycle Common Solutions



for waste more than 50 t/day
huge biogas plants

- lots of transports => CO₂ emissions
- grid connection necessary
- high investment



for small amounts of waste
landfill, composting, incineration

- bad smell
- methane and CO₂ emissions
- gate fee



FruitCycle Solution for small amounts



Containerized biogas plant

- 100, 250 or 500 kg per day or 1,5 – 12 tons per day
- waste treatment on site
- turns waste in fertilizer in 20 days
- low investment
- easy to operate: 10 min/day maintenance
- creates income – saves cost



100 kg/d: 12 ft container (3,6 m long)



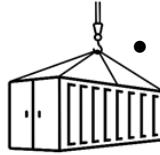
1,5 t/d: 20 ft container (6 m long)

FruitCycle Our Solution



Bert Mobil

- Containerized biogas plant
- Small footprint: starting from 50 m²



Organic Residues

- green waste
- fruit / vegetables / kitchen waste
- food waste
- market waste



FruitCycle



Biogas may be used for

- cooking
- electricity production
- heating / hot water
- cooling
- Bio CNG

residues of biogas process



- non smelly fertilizer

FruitCycle Example



Bert Mobil biogas plant

1,5 t per day food waste

=> 120 m³ biogas per day => 200 kWh electricity or 54 kg LPG equiv. per day

=> 63.000 kWh electricity per year



FruitCycle Facts of Bert Mobil



Users

- everyone with organic waste: 100 kg/day up to 12 t/day
- Suitable for
 - rural areas: agricultural cooperatives, dairy farms
 - cities: market operators, hotels, canteens, schools, universities, airports

Advantages

- Plug & Operate: ready for use – prefabricated – transportable
- No grid connection necessary
- Reduces cost for discharging waste and energy purchase
- Creates income

Financial models

- purchase / leasing / sponsoring (CSR-project)
- FINAME code 03701191, by BNDES

FruitCycle The Team



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We are looking forward to meet

